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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,099	01/27/2004	Tamaki Mashiba	60,707 (49321)	3199
7590	05/19/2006		EXAMINER	
EDWARDS & ANGELL, LLP			BEATTY, ROBERT B	
P.O. Box 55874				
Boston, MA 02205			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/766,099	MASHIBA ET AL.	
	Examiner	Art Unit	
	Robert Beatty	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 March 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 4 is/are rejected.
- 7) Claim(s) 2,3 and 5 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 March 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiraishi.

Shiraishi teach an image forming apparatus comprising a plurality of image forming stations 11K, 11C, 11M, 11Y each having an image carrier along a transfer/transport belt 16 for transporting a sheet past the image forming stations, transfer rollers 17 disposed opposite the image forming stations for transferring color images (black, cyan, magenta, and yellow) to the sheet to form a color image, and a voltage applying device for applying a transfer potential Va to the transfer roller when an image is being transferred to the sheet and a transfer potential Vb to the transfer rollers which are not transferring the images. The non-transfer potential Vb has the same polarity but is a lower level than the transferring potential Va. The transfer belt separates from image forming stations 11Y, 11M, 11C when making a monochrome (black) image. See Fig.s 2-5. The image forming apparatus also has a temperature/humidity sensor 34,35 for detecting the temperature and humidity of the image forming apparatus. The transfer voltage and non-transfer voltage will be corrected depending on the results of the temperature/humidity sensor. See Fig.6.

2. Claims 2,3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. Applicant's arguments filed 3/1/2006 have been fully considered but they are not persuasive.

As seen in applicant's Fig.s 6A - 6E, during a color image forming operation, the transfer belt will be in the position of the dotted line in Fig.2 (or Fig. 1), and a bias transfer bias (1.5 Kv - 4 Kv) will be applied to the transfer rollers when an image is being transferred to a recording medium (transfer process) and a transfer bias (200 - 300V or 50 - 200V) will be applied to the transfer rollers when an image is not being transferred (non-transfer operation). Thus regarding claim 1, a voltage applying device applies a non-transfer bias to only the transfer rollers in contact (via the transfer/transport belt) with the image carrier. The transfer roller performing a transfer operation would not be in contact with the image carrier (via the transfer/transport belt) because a recording sheet would be between them which is receiving a transferred toner image. During a mono-chrome image formation (solid line in Fig.2) where only one transfer roller will be in contact (via the transfer belt) with the image carrier the same ideas apply however applicant is silent as to the bias of the out-of-contact transfer rollers.

Now referring to Shiraishi, during a color image formation the transfer rollers 17 are in contact (via a transfer/transport belt 16) with image carriers 11Y - 11K or only one is in contact during a mono-chrome image formation (see Fig.s 2 and 3). As seen in Fig. 5, voltage applying device will apply a voltage Va to transfer rollers which are transferring a toner image to a recording sheet 19 which are out of contact (via recording sheet) with the image carriers. A voltage Vb will be applied to the transfer rollers not undergoing a transfer operation and which are in contact (via the transfer belt) with the image carriers. The voltage Vb will have the same polarity but lower voltage than the voltage Va. The same ideas apply when a mono-chrome image is formed.

Applicant argues that Shiraishi fails to teach that no bias voltage is applied to the transfer roller when it is not in contact with the image carrier. According to applicant's disclosure, when a transfer roller is not in contact with the image carrier is when a recording sheet intervenes (during a transfer operation) or when a mono-chrome image is being formed (color transfer rollers pivoted away from image carriers). In the former case, a bias has to be applied for the transfer operation to take place, and in the latter, is it believed applicant is silent as to the bias applied or not applied. Therefore, the examiner believes that Shiraishi still teach the claim limitations and the rejection has been continued.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert Beatty
Primary Examiner
Art Unit 2852

May 18, 2006